Oregon
Theodore R. Kulongoski, Governor

Department of Transportation
Transportation Building
355 Capitol St. NE, Rm. 301
Salem, OR 97301-3871

FILE CODE:

DATE: August 29, 2007

TO: Sally Bird, Warm Springs Geovisions
Diann Teeman, Burns Paiute Tribe
Teresa Brasfield, ODOT Region 4 REC
John Zancanella, Prineville BLM
Tobin C. Bottman, ODOT Archaeologist
Amy Pfeiffer, ODOT Region 4 Geology Team Leader

FROM: Bridgett Impecoven, Geo-Environmental Section

Subject: **Request for Concurrence**
Finding of No Historic Properties Affected (Archaeology)
North Barr Road Quarry Expansion Project
Deschutes County, Oregon
Key # N/A, File Type C

Attached is the signed concurrence from SHPO.

Oregon
Theodore R. Kulongoski, Governor

Department of Transportation
Transportation Building
355 Capitol St. NE
Salem, Oregon 97301

August 15, 2007

FILE CODE:

Deschutes County

Cline Falls Quad

T15S, R12E,
Section 18, T15S, R11E,
Section 13

Roger Roper
Deputy State Historic Preservation Officer
State Historic Preservation Office
725 Summer Street NE, Suite C
Salem, OR 97310-1271

Subject: **Request for Concurrence**
Finding of No Historic Properties Affected (Archaeology)
North Barr Road Quarry Expansion Project
Deschutes County, Oregon
Key # N/A, File Type C

Dear Mr. Roper,

SHPO CASE# 07-2115

The Oregon Department of Transportation (ODOT) proposes to expand an existing cinder material quarry sited approximately 1.5 miles south of OR 126 on North Barr Road, eight miles west of Redmond, Deschutes County, Oregon. Located immediately to the west of an existing quarry on Bureau of Land Management (BLM) property, the Area of Potential Effect (APE) is approximately 122 acres in size.

Tobin C. Bottman, ODOT archaeologist, reviewed State Historic Preservation Office (SHPO) documents to determine if any previous archaeological resources studies were completed or archaeological sites recorded in or near the APE. A transmission line survey was previously conducted along the southern terminus of the project area with no cultural resources documented within the current APE (Hylton 2001). As the majority of the APE was not previously surveyed, the Oregon State Museum of Anthropology (OSMA) conducted a survey of a 160 acre parcel on July 5 and 6, 2006 (Tasa, Knowles and Connolly 2006). The OSMA survey identified three archaeological sites and twelve cultural isolates. Informed by geotechnical explorations conducted after this pedestrian survey, the current 122 acre APE was proposed for quarrying within the original 160 acre parcel. Of the cultural resources identified by OSMA, one site (35DS1766) and eight isolates (ISO 1-8) were located within the 122 acre APE and were therefore tested March 29 and 30, 2007 (Tasa, Knowles and Connolly, in preparation). The results of the testing indicate that neither site 35DS1766 nor isolates 1-8 are significant cultural resources and no further investigation is recommended. Attached is a draft copy of the testing report; a final copy will be distributed no later than October 1, 2007.

Based on the current APE, the findings from the OSMA investigations indicate that this project will have no effect on archaeological resources. **However, if the scope of work for the project changes, this includes staging and disposal areas, additional archaeological investigations will be necessary.**

Preliminary application of Section 106 Criteria for Identification and Evaluation of Historic Properties [36 CFR 800.4(d)] indicates a finding of "No Historic Properties Affected" for the North Barr Road Quarry Expansion project, based on the findings outlined above. ODOT, in cooperation with the Prineville District BLM, requests your concurrence with a FINDING OF NO HISTORIC PROPERTIES AFFECTED (Archaeology) for the project.

If you have any questions, please contact James Norman, ODOT Environmental Planning Unit Manager, at (503) 986-3514.

Sincerely,

James B. Norman
Environmental Planning Unit Manager

The State Historic Preservation Office concurs that the North Barr Road Quarry Expansion project will have **No Historic Properties Affected (Archaeology)** *with the caveat that the final draft of the OSMA testing report be submitted no later than October 1, 2007.*

Mollie Mannion 9/27/07

SHPO Official **Date**

Copies with attachments:

Sally Bird, Warm Springs Geovisions
Diann Teeman, Burns Paiute Tribe
Teresa Brasfield, ODOT Region 4 REC
John Zancanella, Prineville BLM
Key # N/A, File Type C

Copies without attachments:

Tobin C. Bottman, ODOT Archaeologist
Amy Pfeiffer, ODOT Region 4 Geology Team Leader

References:

Hylton, Lindon

2001 Cline Falls-Jordan Road Transmission Line. Bureau of Land Management, Prineville District. Report on file at the Oregon State Historic Preservation Office, Salem.

Tasa, Guy, Julia Knowles and Thomas Connolly

2006 Archaeological Survey of the Proposed North Barr Road Quarry Expansion Project. Oregon State Museum of Anthropology Research Report No. 2006-094. University of Oregon, Eugene.

In Press Cultural Resource Survey and Evaluation of Site 35DS1766 and Eight Isolates within the Proposed North Barr Road Quarry Expansion, Deschutes County, OR. Oregon State Museum of Anthropology Draft Research Report. University of Oregon, Eugene.

Oregon
Theodore R. Kulongoski, Governor

OREGON DEPARTMENT OF TRANSPORTATION
Geo/Bridge/Environmental Unit
63034 O.B. Riley Rd
Bend, OR 97701
Telephone (541) 388-6032
FAX (541) 385-0476

Date: August 5, 2008

File Code:

To: Teresa Brasfield
Region 4 Environmental Coordinator

From: Amy Pfeiffer
Project Leader

Subject: Barr Road Quarry (Site N) Public Involvement Summary
OR-09-127-4
Parts of Sec 13, T. 15 S., R. 11 E., W.M.
Parts of Sec 18, T.15 S., R. 12 E., W.M.

This letter transmits a summary of the public involvement information as part of the environmental documentation and application for a Federal Land Transfer for the Barr Road Quarry (Site N). The following is a list of items attached to this letter:

- Public Involvement History
- Frequently Asked Questions
- Pamphlet on Blasting
- Public Information Paper
- Email Correspondence from Russell Frost dated April 14, 2008
- Pages covering the comments related to material sources from the *Upper Deschutes Resource Management Plan and Final Environmental Impact Statement, Volume 2, Chapters 4 and 5 and Summary of Public Comments.*

If you need additional information on ODOT's public involvement, or copies of any of the correspondence on this project, please contact me at 541-388-6052 or Rex Holloway at 541-388-6178.

Barr Road Quarry (Site N)
Public Involvement History
Last updated: August 1, 2008

Date	Activity
1951 and 1955	Oregon Department Of Transportation (ODOT) acquired use of a 30 acre material source from the BLM. It is located adjacent west of Barr Road in the Cline Buttes area and is just east of Site N. The site was used last in 1993.
1992	ODOT initiated discussion with the Bureau of Land Management (BLM) regarding the possibility of opening a new material source on federal land in the Cline Buttes area to meet the public need for aggregate on public highway projects.
Middle 1990's	BLM began development of the Central Oregon Urban Interface Management Plan for BLM lands in Central Oregon. Significant public involvement and public comment was undertaken. The potential for new material sources were a part of this plan. The plan made it to draft EIS stage before being dropped.
Late 1990's	ODOT again approached the BLM regarding development of a source in the Cline Butte area. In coordination with BLM, ODOT initiated an environmental process looking at the need for a new material source for public highway projects in this area.
1998	ODOT completed the Central Oregon Aggregate Study identifying the need for aggregate sources in the Central Oregon area. This document was the basis for a purpose and need statement for an EIS.
September 1999	ODOT completed a study and produced a report called the "Bend/Sisters/Redmond Area Aggregate Study Alternatives Analysis". The study included a screening of existing aggregate sites, an economic analysis of aggregate costs, and an evaluation of the area to identify favorable locations for development of new aggregate sites. Fourteen potential aggregate sites were analyzed, one of them being Site N. During this study, numerous public meetings were held with agency officials, business representatives, and community groups.
1999-2001	ODOT worked with the BLM to determine the feasibility of several of the potential sources of aggregate in the Bend/Redmond/Sisters area identified in the 1999 study. Many sites were evaluated and ODOT conducted environmental work and exploration of several sites, including Site N.

2001	At the request of BLM, ODOT ceased exploration of aggregate sites on BLM lands in the Cline Buttes area and terminated the environmental process that had been initiated related to the material sources. This request was made by BLM to allow them to complete an Environmental Impact Statement, The Upper Deschutes Resource Management Plan (UDRMP). This environmental effort included extensive public involvement. The information that ODOT had developed related to the need for an aggregate resource site and the various options considered in the ODOT process were recognized and addressed in the UDRMP.
January 2005	The Proposed UDRMP and the Final Environmental Impact Statement were published. Volume II contains a list of public involvement events (Chapter 5) and comments and responses to specific issues including mining (attached).
September 2005	The UDRMP Record of Decision was published. Site N was the only potential material site in the Bend/Redmond/Sisters area that remained viable as a result of other UDRMP decisions related to recreation and environmental concerns.
October-December 2005	ODOT and BLM resumed discussions on Site N as a potential source of aggregate materials to meet the public needs related to transportation projects in the area.
January 2006	ODOT formally submitted a request to BLM to continue an investigation of the area identified as Site N, and expressed intention to pursue Site N as a long term material source for public projects on the basis of the subsurface investigation proving out quantity and quality of material.
2006-2007	ODOT performed environmental studies, surveying, and analysis of the quantity and quality of aggregate at Site N. ODOT and the BLM had numerous meetings, discussions, and correspondence to work out the details for use of this site for aggregate materials.
October 2007	ODOT submitted an application through the Federal Highway Administration (FHWA) for appropriation of Site N as a source of aggregate materials for public road projects.
October 2007	A website was developed for the Barr Road Quarry (Site N) Project. http://www.oregon.gov/ODOT//HWY/REGION4/Barr_Road_Quarry_Site_N.shtml
November 2007	ODOT attended a Tumalo Community meeting to discuss Site N. 20-25 people attended. The meeting included a presentation and a question and answer period specific to Site N. The questions asked and answered are listed on the attached document titled, "Frequently Asked Questions".
October 2007 to present	Answered numerous questions from 6 different individuals. Questions were posed in person, by phone, by email, and through "Ask ODOT". Many of the questions answered are listed on the attached "Frequently Asked Questions" document. In addition to these questions, one individual asked for the copy of the ODOT application to FHWA which was supplied to them, and one individual asked for clarification on the outreach process (answered email attached).
October 2007 to present	ODOT continued discussions with the BLM to work out the details for use of Site N as a Material Source.
December 2007	Contacted the JeldWen Eagle Crest Resort to provide them information on Site N and a road paving project.

February 2008	Submitted additional application materials for Site N to FHWA at their request.
April 2008	ODOT received a letter from FHWA indicating that ODOT's application was still incomplete.
May 2008	ODOT met with FHWA and BLM staff to discuss the application process and the additional information that needs to be submitted.

Barr Road Quarry (Site N)
Frequently Asked Questions
Last updated: August 8, 2008

1. **Why site a quarry in the Cline Buttes Area?**

   The Cline Buttes area is proximate to several highways, OR 126, US 97 and US 20, and development of a material source in the area ensures a long term supply of materials needed for maintenance and construction of the highways in the Bend- Redmond-Sisters Area. These highways all represent major travel corridors for residents and tourists as well as major freight routes in and out of Central Oregon.

   This area has been identified as an area in great need of an aggregate supply through extensive studies conducted in the late 1990's. The Central Oregon area is growing rapidly, intensifying the need for improved transportation facilities to handle traffic volumes and improve the safety. In addition, the increased traffic resulting from the population increase is leading to increased wear and tear on the existing transportation facilities.

   The location of an aggregate site in the Cline Buttes area ensures it is proximate to the areas of greatest need. Close proximity to the highways also reduces the haul cost for the rock products and consequently lowers the cost of the construction or paving of highways and decreases the time the road is under construction activities.

   Rock that meets the quality requirements for paving aggregate in sufficient quantity is difficult to locate. The rock at Site N has been tested and meets the quality and quantity requirements for paving aggregate.

   Site N was selected from numerous other potential sites in the area by the BLM and the public. An Environmental Impact Statement was prepared by the BLM, the Upper Deschutes Resource Management Plan (UDRMP), and a quarry at this site is consistent with the environmental analysis. Other alternative sites proposed for development by ODOT were eliminated from consideration through the UDRMP process and decision.

2. **What are the benefits to Oregonians?**

   The benefits to Oregonians are realized through a cost effective transportation system. The location of Site N is proximate to several highways in the Bend- Redmond- Sisters area. Close proximity of Site N to the highways reduces the haul cost for the rock products and lowers the cost of the construction or paving of highways. The site also encourages competition among private rock sources, ensuring that Oregonians realize the lowest prices for aggregate materials and the projects. By obtaining the lowest possible bid for the project, the tax dollars can be utilized more effectively, in essence obtaining more projects for the dollar.

3. **Will there be noise from the aggregate site?**

   Yes, there will be noise generated by operating in the aggregate site. ODOT (and ODOT's contractors) are required to meet all local, state, and federal regulations for noise abatement, and is required to meet the established noise levels. Some of the measures ODOT uses to reduce noise impacts include limitations on hours of operations, muffling of equipment, and using existing and constructed noise barriers/berms.

4. **Will there be dust from the aggregate site?**

   Yes, there will be dust generated from the aggregate site, but dust must be controlled to meet air quality standards. In order to control dust, ODOT requires all operators in the site to develop and implement a dust control plan, and to maintain air quality permits on all portable equipment. This dust control is also required on the access roads during hauling activities.

5. **This site is public land and part of the Cline Buttes area that I use for recreation. Will the site still be available for recreational uses?**

   Yes. If the recreation is consistent with the BLM management plan covering this area, you will still be able to use the site for recreation. For safety reasons, portions of the site will temporarily be closed during aggregate extraction activities. Advanced notice, warning signs and physical controls will be used to warn and restrict recreational users of the area when it is necessary during periods of active operations.

6. **Will there be blasting at the aggregate site?**

   Yes. Most aggregate mining requires blasting. ODOT sets standards for blasting in the quarry site requiring contractors to employ measures to ensure safe blasting practices. These measures include resident and recreational user notifications, submitting blasting plans for review, and controlling fly rock and ground vibrations. ODOT limits blasting activities to certain hours of the day and days of the week. Actual blasting events are only seconds in duration, with most quarries generally requiring only one to two episodes per operation, therefore, the total blasting event associated with any given operation will have duration of less than a minute. A pamphlet describing more details blasting is attached to this document.

7. **What does an aggregate site look like and how does it operate?**

   An aggregate site like Site N, a quarry, consists of a steep rock face, a flat expanse of ground below the working face where the machinery operates, and an area adjacent to the flat area where crushing and mixing operations are conducted and aggregate materials are stockpiled. Typical equipment on the site includes bulldozers, front end loaders, hauling vehicles (dump trucks), portable rock crushers, shaker screens for sorting rock, and conveyor belts. Portable asphalt plants may be used for mixing rock with asphalt to produce pavement.

   Unlike privately owned aggregate quarries, this site will not be in operation continuously and not in operation for profit. Site N will only be used for public highway construction and maintenance purposes. The duration of any particular operation will depend largely on the size and type of the highway project. On a large project, crushing and batching and hauling activities may last 6-9 months. In between major projects, the site remains available for other uses, including recreation if consistent with the BLM plan.

During each project, new material is mined, and areas no longer needed for mining are reshaped and vegetation is planted consistent with the development and reclamation plans that will be prepared and approved for the site.

8. How often will the site get used?

The frequency of mining in the site depends on a number of factors including transportation funding levels, transportation system needs, and availability and cost of alternate sources of aggregate. A typical ODOT aggregate site is used for larger projects once every 5 to 10 years, but due to the strategic location of this site and the increasing demand for high quality aggregate materials in the Central Oregon area, this site may see more frequent use. In addition, due to the very strategic location, this site will likely be sporadically used between major projects to meet the smaller material needs associated with maintenance activities.

9. How big is this quarry site?

The proposed appropriation is approximately 105 acres. The actual area open for active material extraction, processing and stockpiling will vary depending on size of the projects and the specific area being developed at the time. At no time will the entire site be open. The development and reclamation plan for Site N will include elements of concurrent reclamation, with various areas undergoing reclamation as other areas are undergoing development.

10. Why such a large site?

It needs to be understood that the identification of a long term source of high quality material is not easy. It is difficult to find a site that has large volumes of high quality rock in Central Oregon. Once identified, it is a very time consuming and expensive process to gain the necessary approvals and environmental clearances necessary to permit and open such a site.

This effort has taken more than 15 years and has been expensive in both time and money for ODOT, the BLM and the general public involved in the effort. The public need for this material exists and it would be completely irresponsible of ODOT and BLM to look at a smaller site that would not meet the long term need for material in this area. This is not a process that either agency or the public can afford to undertake on a regular basis.

11. What is the life expectancy of this site?

ODOT estimates that three million cubic yards of high quality rock is likely available within the boundaries of this site. Projects like the Redmond Reroute or the Bend Parkway have required nearly half a million yards of material per project but most surfacing projects utilize less than 100,000 cubic yards per project. Depending on the schedule of projects in the Central Oregon area, it is likely that this site represents a 20 year life cycle.

12. What are the traffic volumes and routes associated with the operations?

Traffic from an active material source can be intense during peak construction season. It is feasible that several hundred truck trips per day will be generated from this site during the peak paving season. Based on the location of this site, the likely haul route would be

from the source east to Barr Road (an unimproved county road) and then north on Barr Road to Hwy. 126. From Hwy 126 trucks will travel to the various project sites. At this time, Barr Road is in a primitive condition to the south of the quarry site and would not be feasible as a haul route. Barr Road is a county owned roadway facility.

13. What are the environmental concerns?

With every proposed development, especially those proposed on public lands, concerns are raised relative to the environment: wildlife, threatened and endangered species, wetlands, archeological and historic resources, ground water, surface water and so forth.

This site has been reviewed for all of these concerns. The site has no wildlife concerns, no threatened and endangered species, no wetlands, and the site has been reviewed and cleared for historic and archeological resources. Ground water in this area is several hundred feet below ground surface, no springs were identified within the boundaries and surface water will be maintained on site. From and environmental standpoint, this site is one of the most innocuous sites that could possibly be identified from an environmental standpoint.

14. What are the impacts to humans?

Development of this site will have human impact, both negative and positive. Access and use of this site will be restricted to the general public when active operations are in process. As mentioned above, active quarry operations are ground disturbing activities, the landscape will change. Noise, dust and traffic will result from active operations. The proposed 105 acre site represents a very small percentage (0.3%) of the public lands in the Cline Buttes area (32,000 acres)

No site can be developed anywhere that will have absolutely no human impact. As mentioned above, this site will be utilized for public transportation projects in the Central Oregon area. The material will be utilized to construct, improve, maintain and enhance the safety of the roads that Central Oregonians utilize to get to work, to stores, to schools and to recreation areas and to transport goods.

The location of this site is in an undeveloped area, at least a quarter mile from the closest homes. It is located adjacent to an existing cinder pit. The haul route will utilize existing roads, approved for this purpose, and will not pass by any residential, business, school or emergency facilities. The haul route will take vehicles directly from the site to a state highway without utilization of improved county, city or privately maintained roads.

The negative impact will only be to those people who use this area for recreation purposes, but only during quarry activities. The positive impacts will extend to all Oregonians who use the highway facilities, either directly or indirectly. This rock will be used to improve and enhance safety of the public highway system.

Summary

Purpose:

Maintaining and constructing highways requires high quality sources of aggregate materials. More than 90% of the highway is constructed of rock or soil products. Sources of aggregate, an essential road building material, is an integral part of ODOT's mission " To provide safe, efficient transportation systems to support economic development and livability for Oregonians".

Location:

Barr Road Quarry (Site N) is located in the Cline Buttes area adjacent to an existing material source off of Barr Road. The Cline Buttes area is proximate to several highways, OR 126, US 97, and US 20, and development of a material source in the area ensures a supply of high quality materials needed for maintenance and construction of the highways in Central Oregon.

Environmental Studies:

An Environmental Impact Statement (the Upper Deschutes Resource Management Plan, UDRMP) was prepared by the BLM and includes Site N. The location and operation of Site N as a material source is consistent with the UDRMP. In addition to the environmental work conducted in the UDRMP, site specific environmental studies have been conducted at Site N. These include studies addressing the following environmental resources and impacts: archeological, wildlife, threatened and endangered species, socio-economics, air quality, water quality, erosion, and visuals.

Operations in the Aggregate Site:

ODOT sets specific conditions for any operations in the quarry site. These conditions include the following:

Dust control plans and dust abatement
Adherence to noise standards
Blasting safety and protection measures
Site- specific erosion and pollution control plans
Long term site safety measures
Concurrent development and reclamation efforts

Preparing for a Blast

The key to making sure blasts are carried out successfully and safely is to know what the issues and concerns are when designing the blast.

When ODOT or a contractor is preparing for the blasting phase of a project, workers try to be thorough in identifying all elements of concern, but sometimes things are not obvious. This is why ODOT and the contractor need to rely on local knowledge of the surroundings. It is in the best interest of ODOT and the contractor to complete this work in a timely, efficient and safe manner.

Other methods that ODOT employs to ensure a successful and safe blasting operation:

- Require an approved blasting consultant to design/approve the blasting plans
- Perform pre-blast surveys. These are done either by or through the blasting contractor prior to the blast to document the condition of structures, foundations, and windows prior to exposure to vibration from blasting.
- ODOT reviews the submitted blasting plans prior to allowing the blasts to proceed
- Require ground vibration monitoring during the blasts
- Require that blast mats be laid upon the blast area to help contain flying rock
- Blasting contractors are licensed and bonded

For related information about the technical aspects of blasting, visit:

www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/ (click "Material Sources" in left column)

www.dnr.state.il.us/mines/bed/aggblast.pdf

www.cbbgreenbush.com/town_hingham_blasting.html

www.eblasting.com/blast_apps.htm

www.aggman.com/0802_pages/0802operations.html

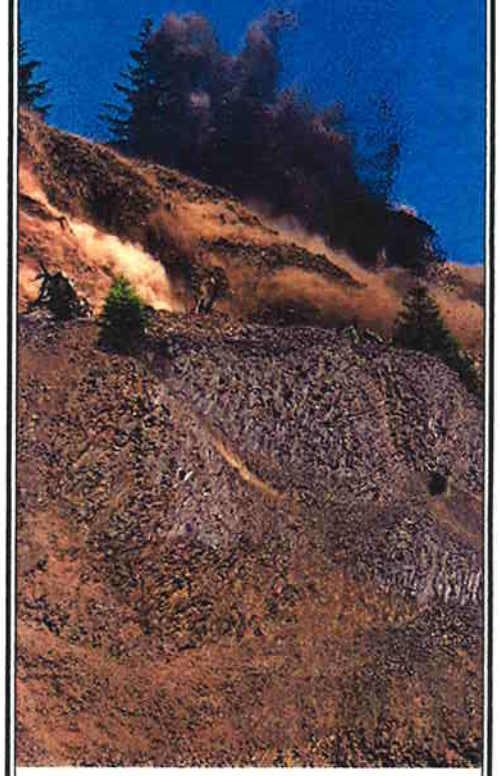
Oregon Department of Transportation

For more information about a specific project, contact "ASK ODOT" at:

1-888-275-6368 or www.oregon.gov/ODOT/

Oregon Department of Transportation

Rock Blasting and the Community



Oregon Department of Transportation

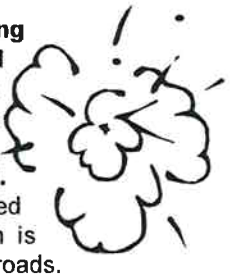
The Oregon Department of Transportation maintains quarries as part of a statewide material source network in order to obtain rock material used for construction, maintenance, and emergency repair projects.

This material is crushed and sorted for use in building and paving state highways and other public projects. The process to excavate the rock often requires blasting in the quarries. The potential damage from ground vibration, airblast (sound) and flying debris is a major concern to both ODOT and nearby residents.

Every effort is taken, however, by both ODOT and its blasting contractors to greatly minimize and eliminate potential impacts on neighboring properties from this type of work.

What is Blasting?

The purpose of blasting is to loosen and fragment in-place rock materials to a size that can be removed, transported or crushed. Often the rocks are turned into aggregate, which is used to build and pave roads.



Within the quarry, holes commonly 3½ inches in diameter are drilled down into the rock mass. The holes are filled with an explosive, which is a chemical mixture that reacts at a high speed to generate gas and heat. Upon initiation, this reaction causes tremendous outward pressures and energy.

Two basic forms of energy are released when explosives react: shock and gas. Shock energy is the pressure transmitted outward from the hole in the rock and causes microfractures to form and travel outward for a short distance. Gas energy is pressure caused by expanding gases, created by the chemical reaction. These gases follow the path of least resistance along existing and newly-formed fractures in the rock and cause the majority of rock breakage in quarry blasting.

Energy not used for rock breakage is wasted in the form of ground vibration and airblast. Ground vibrations are seismic waves that spread out along and through the ground from the drill hole and are measured with a seismometer. Vibrations, typically far below the levels required to produce damage to plaster or windows in houses, can be felt by humans.

Airblast is an airborne wave created by the blast and is observed by people as sound and pressure. Again, sound and pressure below the levels required to damage walls and windows, can be felt by humans.

Blasting & Groundwater

Blast vibrations are highly unlikely to permanently decrease groundwater quality, but can sometimes cause local and temporary cloudiness as sediments are dislodged.

These sediments can remain in suspension for days or weeks, but this is only temporary and aesthetic and does not suggest physical damage to the aquifer or well. In fact, **blast vibrations have been shown in a number of cases to improve the long-term water yield in aquifers** by "flushing out" fine sediments from between joints, allowing more permeability and overall storage.

What About Safety?

Extensive research about blasting has been conducted by the United States Bureau of Mines (USBM) and the Office of Surface Mining (OSM), universities, and private groups for more than 40 years. This has led to the development of acceptable vibration standards that greatly reduce the risk of off-site impacts. **Ground vibration levels have been set by law to avoid off-site damage and should feel the same as a loaded truck or bus going by 50 to 100 feet away.**

Studies have shown that significant fracturing in the rock around a typical blast hole is limited to a distance of 20-40 hole diameters, which is 6 to 12 feet for the commonly used 3½ inch hole. This short distance of fragmentation is evidenced by most quarry blastholes being spaced 6 to 14 feet apart; the explosive energy is insufficient to fracture the rock at any greater distance from each blasthole. When a confined explosive charge is detonated, the zone of permanently deformed material is ideally cone shaped with the point down, with very little fracturing below the blasthole.

Damage and injury from vibration, airblast and flying debris is still a concern. However, ODOT and its blasting contractors use a variety of safeguards, technology and knowledge to make this inherently dangerous task safe for themselves and surrounding property.

Oregon Department of Transportation

Barr Road Quarry (Site N)

Key Project Components:

- Develop a high quality rock source in the Cline Buttes area for use on state highway projects.
- The quarry site is located on land managed by the Bureau of Land Management (BLM). The site is approximately 105 acres in size.
- Exploration in the area has revealed a high quality rock source that could produce approximately 8 million tons of aggregate and could last 20 years.
- Having a public rock source allows more contractors to bid for state highway projects, allowing the State to receive the most competitive bids possible, and the taxpayers to get the best transportation value for their tax dollar.

Location

The Barr Road Quarry (Site N) is located in the Cline Buttes area adjacent to an existing 30 acre cinder pit off of Barr Road (see vicinity map at end of document).

Background

Maintaining and constructing highways requires high quality sources of aggregate materials. More than 90% of a highway consists of rock or soil products. Sources of aggregate, an essential road building material, are an integral part of ODOT's mission "To provide safe, efficient transportation systems to support economic development and livability for Oregonians".

The Cline Buttes area is proximate to several highways: OR 126, US 97 and US 20. Development of a material source in the area would ensure a long-term supply of materials needed for maintenance and construction of the highways in the Bend-Redmond-Sisters area.

This area was identified as an area in great need of an aggregate supply through extensive studies conducted in the 1990's. Of all of the sites considered in the study, Site N is the only remaining viable public rock source in the Bend-Sisters-Redmond area. This site was made available for mineral use by the BLM in their Upper Deschutes Resource Management Plan (UDRMP) Environmental Impact Statement and Record of Decision completed in 2005.

In addition to the environmental work conducted in the UDRMP, site specific environmental studies have been conducted at the Barr Road Quarry site. These studies included: archeology, wildlife, threatened and endangered species, socio-economics, air quality, water quality, erosion, and visuals.

ODOT sets specific conditions for any operations in the quarry site. These conditions include the following: dust control plans and dust abatement, adherence to noise standards, blasting safety and protection measures, site-specific erosion and pollution control plans, long-term site safety measures, and concurrent development and reclamation efforts.

Timeline

1992-2006 - ODOT conducted many studies to identify and address the aggregate need in Central Oregon. These efforts included significant public involvement and environmental studies. The most recent of these efforts was the BLM Environmental Impact Statement for the Upper Deschutes Resource Management Plan.

Fall 2007 - ODOT will make an application through the Federal Highway Administration (FHWA) for use of Barr Road Quarry (Site N) as a source of aggregate materials for public road projects.

Fall 2007/Winter 2008 - FHWA will review the application and environmental studies, and if the application is complete, FHWA will send the application to the BLM.

Winter/Spring 2008 - BLM will review the application and evaluate it for consistency with the UDRMP. The application will be sent back to FHWA.

Summer/Fall 2008 - The application process will be finalized. The land remains property of the BLM, but ODOT acquires the ability to use the site to mine and process aggregate materials for use on state highway projects. ODOT will submit a reclamation plan and other documents necessary to permit the site through the Department of Geology and Mineral Industries (DOGAMI).

Contacts

Name	Telephone Number	Email Address
Amy Pfeiffer, Project Leader	541.388.6052	Amy.L.Pfeiffer@ODOT.state.or.us
Rex Holloway, Community Liaison Representative	541.388.6178	Rex.A.Holloway@ODOT.state.or.us

Internet Links

Barr Road Quarry Project Website

BLM Upper Deschutes Resource Management Plan
http://www.blm.gov/or/districts/prineville/plans/deschutesrmp/index.php

PFEIFFER Amy L

From: FROST Russell G

Sent: Monday, April 14, 2008 9:21 AM

To: 'Beverly Southern'

Cc: COONEY Patrick J; MURPHY Peter W; THIEL Katie; HOLTHOFF Greg; PFEIFFER Amy L; HOLLOWAY Rex A; BRASFIELD Teresa L; DAVIS Randall K; WILLIAMS Rick * Reg4

Subject: RE: Porposed use of Site N

Dear Mr.. and Mrs.. Southern, in response to your follow up questions I will provide you with several names and titles and brief description of what they do. Depending on your future questions, hopefully you can determine who you may want to contact. The reason for the multiple names is that the term "public scoping" can mean several different things, and depending on what the project specifics are and the purpose or intent of the public process, will determine who would be involved.

In **Region 4**, I have several names for you.

Rex Holloway - Rex is a Community Liaison Representative and he is involved in developing and providing information on projects helping to keep the public informed on what is happening related to ODOT projects. Rex is familiar with Site N.

Teresa Brasfield - Teresa is an Environmental Coordinator here in Region 4, and she is involved in the NEPA (National Environmental Policy Act) processes for projects, and is involved with Site N. I do want to let you know that Teresa is out of the office and not scheduled to return until the 21st of this month. So if you have a specific question related to Site N, you should contact Teresa when she returns.

Rick Williams - Rick is an Environmental Project Manager here in Region 4. Rick has not been involved in Site N, and does not have specific information related to this site, but if you have a general question related to NEPA, he may be able to answer your questions.

Statewide:

Katie Thiel - Citizens' Representative - Katie is in Salem and would be involved in providing the public information related to ODOT activities statewide. I doubt that Katie is familiar with Site N, but would likely be able to answer general questions related to ODOT activities and public information preparation and distribution.

Greg Holthoff - Greg is an Environmental Project Manager, also in Salem, and should be able to answer generic questions related to the environmental processes and the public involvement process for projects in the NEPA process, but is likely not familiar with Site N specifically.

As for your second question regarding an economic analysis for Site N, I am not sure what exactly you are looking for, but in 1998 ODOT did complete a document titled "Economic Analysis of the Aggregate Industry for the Bend/Sisters/Redmond Area". This document was not Site N specific, but it did evaluate the economics of the aggregate industry in Central Oregon and details out the cost benefits of publicly controlled material sources as related to public transportation projects. I do not have an electronic copy of this document, but it should be available at the Deschutes County Library. The various factors that influenced the economic evaluation detailed in this report are still applicable today, and in many instances have increased, meaning the cost benefit ratio of developing a source like Site N has increased or become even more of a benefit to the public.

I hope this answers your questions and that one of the folks above can answer your questions related to public scoping. If you have further questions, let me know.

From: Beverly Southern [redacted]
Sent: Friday, April 11, 2008 3:23 PM
To: FROST Russell G; COONEY Patrick J; MURPHY Peter W
Subject: Porposed use of Site N

Dear Mr Frost

We have a couple more questions that hopefully can be answered.

1. Is there an identified position at ODOT, both at Region 4 and at the state level for public scoping? If so, please forward to us the name of that person & position held at both Region 4 and the state level.

2. Would you please forward to us the economic analysis for this proposed use of Site N ?

Sincerely Don and Beverly Southern

PFEIFFER Amy L

From: FROST Russell G

Sent: Wednesday, March 12, 2008 9:53 AM

To: 'Beverly Southern'

Cc: PFEIFFER Amy L; DAVIS Randall K; FARNSWORTH Gary C; BILLINGS Scott D; HOLLOWAY Rex A

Subject: RE: Public Outreach

Dear Mr. and Mrs. Southern

I have been asked to respond to your questions regarding public outreach related to ODOT material sources. The answer to your questions is dependent on ownership of the property. With no specific site identified in your questions, I will attempt answer your questions and explain the different processes that would be followed based on alternative ownership.

If ODOT were to propose a new gravel pit, what public outreach would ODOT need to follow?

If ODOT were to purchase private property for the purpose of a new material source, or to develop and existing ODOT owned property, ODOT would be required to obtain both a State mining permits from the Department of Geology and Mineral Industries, and also be required to obtain a local agency (County) land use permit or zone change. If the site was not previously recognized as a material source and permitted in the past, the DOGAMI mining permit would require circulation through numerous natural resource state agencies for comments. This circulation would represent one element of public outreach. In the local permit process, there would also be public outreach as part of the conditional use permit process or the PAPA (Post Acknowledged Plan Amendment) process. The exact process is dependent on what county the site is in, and what the local land use regulations say. In all cases, public outreach is addressed in the local permitting effort, with notification of the surrounding property owners, and comment periods timelines associated with the process.

If ODOT were to propose to develop a new material source on federal lands (Bureau of Land Management or United States Forest Service) the process is different. On federal lands the process is even different between BLM and the USFS. Both BLM and USFS are consistent in that actions proposed on federal lands are evaluated based on the Federal Land Policy and Management Act, and on the appropriate management plan that the federal agency has for the identified parcel. The management plans that federal agencies have for their lands that detail use or allowed uses of the federal lands are all developed based on extensive public involvement.

For USFS sites, ODOT would request a permit from the USFS for a site. The USFS would evaluate the proposed action to see if it is consistent with the appropriate management plan. With new sites on USFS lands, a second level of public outreach would be associated with the environmental process. On USFS lands, the local District Ranger with their staff, evaluate the request and determine based on site conditions what level of NEPA classification the proposed action would receive. Based on the NEPA classification the appropriate public involvement process would be followed.

For sites on BLM lands the process is similar, but with a twist. Similar in that BLM will evaluate all requests against the current management plan for the area and determine if the proposal is consistent with the plan. The difference is that for material source properties on BLM there are several different avenues that ODOT can follow to obtain use of a material source. If the proposed source is for non federally funded work, which generally means the use of the source will be primarily for ODOT maintenance, not construction, then ODOT would directly apply to the BLM for a permit. The environmental classification of the proposed activity would be evaluated by the BLM Field Manager and staff, and the public outreach would be based on this determination.

For sites on BLM lands, that are proposed for use on federally funded projects, the process is different. BLM and FHWA (Federal Highway Administration) have a national level MOU (Memorandum of Understanding) between the agencies which addresses the appropriation of BLM lands needed for transportation purposes, both for highway right of way and material sources. With this process, ODOT does not directly apply to the BLM for development of a material source property. Based on the MOU between FHWA and BLM, the request for the

property would be from FHWA to the BLM. The MOU, details that the environmental classification of the the proposed action be determined by FHWA in coordination with the BLM. Again, the public outreach related to the proposed actions is based on the requirements of the environmental classification, but the difference is that the FHWA environmental process and action classification is somewhat different than the BLM process, potentially leading to slight differences in the public outreach process.

If ODOT were to propose an expansion to an existing gravel pit, what public outreach rules/requirements would ODOT need to follow?

The answer to your second question is similar to the one above, but there is a difference between expansion of a material source versus the identification and development of a new source. And it needs to be understood that the term you use, "expansion", matters as well. If by "expansion" you are asking what public outreach would be required to initiate mining activities in a new area of an existing and fully permitted site, the answer is that no additional public outreach is required, if the identified boundaries of a permitted site are not being modified.

If by "expansion", you mean, the addition of new acreage to an existing site, then the processes outlined above for a new source would generally apply. If it is private or state owned property, the local agency would be involved in the expansion as would the State Department of Geology and Mineral Industries. Public outreach would again be an element of the State permit circulation and the local agency permit process. If the site is on federal lands and the proposal is to expand and existing site, the expansion would be evaluated by the appropriate federal agency for consistency with their approved management plan and for an environmental classification, made based on the site conditions and environmental concerns. Additional public outreach related to an expansion, if any would be based on the appropriate federal agency determination of the environmental classification.

Hopefully I have answered your questions. I realize that my response is rather long in comparison to your relatively short questions, but the issue you address is not straightforward. Hopefully my responses are clear, but also convey the complexity and differences in the processes. If you have further questions, let me know.

From: FARNSWORTH Gary C
Sent: Wednesday, March 12, 2008 6:27 AM
To: FROST Russell G; BILLINGS Scott D
Cc: PFEIFFER Amy L; DAVIS Randall K; 'Beverly Southern'
Subject: RE: Public Outreach

Russ/Scott,

Would you please respond to this request from the Southern's?

Thanks, Gary

From: Beverly Southern [redacted]
Sent: Tuesday, March 11, 2008 5:36 PM
To: FARNSWORTH Gary C
Subject: Public Outreach

Dear Mr Farnsworth

If ODOT were to propose a new gravel pit, what public outreach would ODOT need

to follow?

If ODOT were to propose an expansion to an existing gravel pit, what public outreach rules/requirements would ODOT need to follow?

If you could please refer me to the above information or links, I would be appreciative.

Sincerely Don and Beverly Southern

PFEIFFER Amy L

From: Ask ODOT
Sent: Friday, April 04, 2008 2:36 PM
To: PFEIFFER Amy L
Cc: MURPHY Peter W; BAILEY Kelly A; COONEY Patrick J
Subject: FW: Public Scoping re proposed Site N in Cline Buttes Rec Area

Hi Amy:

Please respond directly to the citizen's inquiry on behalf of Patrick Cooney within 5 business days or forward to the appropriate person upon receipt.

Also, please provide a copy of the response by e-mail to AskODOT@odot.state.or.us or provide confirmation that the citizen has been contacted by phone, for our records. (All referrals from ASK ODOT are monitored under agency performance measures with the standard response of 5 business days.)

Thanks for your assistance in this matter, and please don't hesitate to contact me if you have any questions.

Katie Thiel
ODOT Citizens' Representative
355 Capitol St. NE, Room 135
Salem, OR 97301
888-275-6368 Ask ODOT
503-986-3934 Direct
503-986-3396 Fax
AskODOT@odot.state.or.us

-----Original Message-----
From: Beverly Southern [redacted]
Sent: Thursday, April 03, 2008 10:44 PM
To: COONEY Patrick J
Cc: MURPHY Peter W
Subject: Public Scoping re proposed Site N in Cline Buttes Rec Area

Dear Mr Cooney We are emailing you on behalf of a large group of concerned citizens, adjacent landowners, recreationists, and locals. We are having difficulty finding out from local ODOT officials (our public servants) addressing our concerns re what public scoping has been followed or is planned for the Draft Site N proposal ?

This is the very same site that their was great public outcry and picketing at meetings in the early 2000's here in Bend. We have not forgotten that this is the same place, same issue, different date/year.

A response would be appreciated as soon as possible.

Sincerely Don and Beverly Southern

PFEIFFER Amy L

From: FROST Russell G
Sent: Tuesday, April 08, 2008 2:01 PM
To: 'Beverly Southern'
Cc: COONEY Patrick J; DAVIS Randall K; HOLLOWAY Rex A; PFEIFFER Amy L
Subject: Public Scoping re proposed Site N in Cline Buttes Rec Area

Dear Mr. and Mrs. Southern, I have been asked to respond on behalf of ODOT to your question, that you sent to "Ask ODOT" on April 4th. I have copied your question below.

Dear Mr Cooney We are emailing you on behalf of a large group of concerned citizens, adjacent landowners, recreationists, and locals. We are having difficulty finding out from local ODOT officials (our public servants) addressing our concerns re what public scoping has been followed or is planned for the Draft Site N proposal ?

This is the very same site that their was great public outcry and picketing at meetings in the early 2000's here in Bend. We have not forgotten that this is the same place, same issue, different date/year.

A response would be appreciated as soon as possible.

Sincerely Don and Beverly Southern

Apparently when I responded to your previous question, on March 12th, I didn't answer the question adequately. But as I mentioned in my original email response to you, your question was not site specific, as such, my response was generic. I also mentioned in my earlier email response to your questions, that if you had further questions to contact me.

Now that you have specifically identified the proposed Site N Quarry as the site of interest, I can be more specific in addressing your question. Again, I will say, if my following response is not clear or does not answer your question, please contact me. I am more than willing to try and answer your questions.

Now, as for the Public process related to Site N, and the Cline Buttes Recreation Area. From your question above, it is clear that you are aware that the proposed Site N Quarry is located on BLM lands. So, to start the response to your current question, I have copied a portion of my original response, regarding public involvement related to material sources on BLM lands. I will get into specifics related to Site N, below.

If ODOT were to propose to develop a new material source on federal lands (Bureau of Land Management or United States Forest Service) the process is different. On federal lands the process is even different between BLM and the USFS. Both BLM and USFS are consistent in that actions proposed on federal lands are evaluated based on the Federal Land Policy and Management Act, and on the appropriate management plan that the federal agency has for the identified parcel. The management plans that federal agencies have for their lands that detail use or allowed uses of the federal lands are all developed based on extensive public involvement.

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Now for specifics on Site N. In your question to "Ask ODOT" you mention that this is the very same site that there was public outcry over back in 2000. I want to clarify for you that this process actually started in 1992. In the early 90's ODOT contacted the BLM about the potential for opening a quarry site on BLM lands in the Cline Butte area for use on public transportation projects. The BLM response was that they were planning to update their management plan for public lands under BLM control in all of the Central Oregon area and that the ODOT request would be covered in the management plan. The BLM embarked on this effort and spent the next 2 to 3 year developing an EIS for a revised management plan. This BLM process culminated with the publishing of a draft Management Plan. ODOT as well as many members of the community and various recreation groups were involved in this effort and provide considerable input to the BLM. The BLM took comments on the draft EIS and then for never finished the process apparently due to financial reasons.

In the late 90's when ODOT asked about the completion of this effort, we were told by the BLM that the process was stopped and would not be completed. It was at that time, with BLM consent that ODOT initiated the Central Oregon Aggregate Study, the process that you mention was met with public opposition. In this process, ODOT did not evaluate a single site, but rather ODOT investigated 14 sites located throughout Central Oregon in an effort to identify sites to meet the public need for aggregate related to transportation projects. In response to the public opposition, the BLM was able to come up with funding and positions to begin again the effort of developing a new Management Plan for BLM lands in Central Oregon. Once the BLM began this new effort, ODOT's Central Oregon Aggregate Study was stopped in response to a BLM request and all information that had been gathered related to material sources was provided to the BLM for inclusion in their effort.

So from early 2000 until the Record of Decision for the Environmental Impact Study for the Upper Deschutes Resource Management Plan was signed in 2005, BLM staff, private citizens, other government agencies, representatives from the Tribes, recreation groups and many others including ODOT worked on the development of the current management plan. Hundreds if not thousands of hours were invested in this process which included working sessions, public field trips and numerous public meetings as well as several rounds of general public comment opportunities to arrive at the final decision represented by the Upper Deschutes Resource

Management Plan.

In the many work sessions and public meetings as well as the open public comment period, the potential for future use of the Cline Buttes area for the development of a public material source was always in the mix. Of the 7 proposed mine locations that had been identified by ODOT and the BLM in the Cline Buttes area, all but one were eliminated in the development of the Upper Deschutes Resource Management Plan. The 6 sites that were eliminated, were eliminated for various reasons such as ACEC (Area of Critical Environmental Concern) for specific plants, equestrian area, preservation of historic sites, and other recreation and environmental concerns. The only proposed site that made it through this process as still being potentially available for is Site N.

So, to answer you current question, after 15 years of public involvement, 3 EIS efforts (one reaching completion in the Upper Deschutes Resource Management Plan) the potential development of the Site N Quarry for use on public transportation projects gets us to where we are at today.

When the Record of Decision was signed, ODOT sent a formal request to the BLM for a permit to complete additional subsurface investigation to verify that in this location there was adequate quantity and quality of rock to meet the need for public transportation projects in the Central Oregon Area. In this request, it was explained to the BLM, that if the rock proved to be available, ODOT would follow this up with a formal request to appropriate this area of federal lands for use as a material source. After the drilling investigation was completed, it was proven that adequate quantity and quality of rock were available in the site. ODOT has continued to work with the BLM on the proposed appropriation and development of the site.

The BLM has also been working on the development of a OHV trail system in the same area as the proposed Site N Quarry. ODOT has also been involved in this process. ODOT has formally submitted information related to our proposed application and we have met numerous times with BLM staff to discuss how both recreational and mining activities are compatible in this area.

While ODOT has been working with the BLM on details around the proposed use at Site N, ODOT has also responded to inquiries from citizens such as yourself, regarding the proposal. Recently ODOT staff attended a community meeting in Tumalo and provided a presentation and conducted a question and answer session. An information package detailing the proposed action and process was developed and distributed to those expressing interest.

The process for federal land appropriation is described above in my original response, so I will not repeat it again here, but in summary, the appropriation process is a federal action, between the Federal Highway Administration and the Bureau of Land Management. ODOT has formalized our request to appropriate Site N Quarry for use on public transportation projects, and we have submitted the request to the Federal Highway Administration. FHWA will now evaluate the proposed appropriation and work with the BLM to reach a final decision on the request.

If, as this process moves forward, the Federal Highway Administration in coordination with the

BLM, determines that there is a need for additional public processes, then that determination will be followed. If on the other hand the BLM and FHWA determine that the proposed use of Site N as a quarry site was adequately addressed in the development of the Upper Deschutes Resource Management Plan and the subsequent environmental documentation, the appropriation process will move forward without additional public involvement.

In summary, the public involvement related to the proposed Site N Quarry, has been ongoing for the past 15 years or more. If additional public involvement is identified by the federal agencies related to the appropriation then the additional public involvement will be conducted.

Hopefully I have answered your question. Again I will suggest that if you have further questions regarding the Site N Quarry please contact me. I will be happy to try and answer any further questions.